

## FACT SHEET | Severe Trauma Simulation

Current technologies for simulating severe trauma are not realistic or clinically accurate. These simulations do not look, feel, smell, act or react properly. Medics returning from combat have conveyed how the current simulations did not prepare them for the horrific injuries they treated on the battlefield. The objective of the Severe Trauma Simulation Army Technology Objective (ATO) is to research and develop severe trauma simulation technologies to prepare the Army's Soldiers to deal with the injuries encountered on the battlefield.

All caregivers must overcome the natural horror that traumatic injuries cause. Many Soldiers are not prepared to treat such injuries and are thus less effective in the use of their medical skills. Additionally, battlefield conditions are vastly different from traditional sterile training of the schoolhouse. Lessons learned from Iraq and Afghanistan show that traditional techniques and procedures for treating injuries can be improved. For example, field dressings do not stick well to profuse bleeding so Soldiers are improvising in the field at critical times. Realistic simulated trauma will allow warfighters to master their skills and their equipment before entering the battlefield.

The result of this effort will be a capability to realistically simulate the look, feel and smell of severe trauma for training medics, combat lifesavers and Soldiers. The simulations will be based on training scenarios appropriate for the current OPTEMPO in the GWOT.

Simulated skin, flesh, bone, fluid and blood will be reusable, cheaper, more realistic and more durable. These simulated injuries will enhance training using patient simulators, actors or stand alone partial task trainers.

Technology being developed under this ATO is showing enough promise to eventually be usable in surgical training. Several new materials have been discovered that can realistically simulate the look, feel and density of various tissues found in the body. Further development of these materials is being pursued in the final year of this ATO to prove the viability for surgical training and for reduction of live tissue training at all levels of care.

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